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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/392,019	09/08/1999	DAVID CAHILL	B0630/7020	9463

23628 7590 04/08/2005

WOLF GREENFIELD & SACKS, PC
FEDERAL RESERVE PLAZA
600 ATLANTIC AVENUE
BOSTON, MA 02210-2211

EXAMINER	
LEE, PING	

ART UNIT	PAPER NUMBER
2644	

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/392,019	CAHILL, DAVID	
	Examiner	Art Unit	
	Ping Lee	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9,11 and 12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,11,12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the variable impedance component is at least one of a compressor or a limiter as specified in claims 1 and 12. No new matter is allowed to be introduced into the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 3-9, 11 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification as originally filed fails to disclose the variable impedance component as specified in claim 1 and the variable impedance component is at least one of a compressor and a limiter as specified in claim 12. Fig. 1 shows a compressor limiter. However, no detail of this compressor limiter is being disclosed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 7, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Noro (US 4,969,195).

In view of the 112, 1st paragraph rejection, the claims have been rejected under broadest interpretation.

Regarding claims1 and 12, Noro discloses a thermal overload and resonant motion control circuit (col. 3, lines 55-68) for an audio speaker (3 in Fig. 1) driven by a drive signal from an amplifier (11), the circuit including: a feedback signal generating (fsg) circuit for generating a feedback signal (to 6), said feedback signal being a function of both drive current to the speaker and speaker impedance (col. 3, lines 44-47); and an attenuator (52, 6, 13) operable in response to said feedback signal (from 51) for controlling said drive signal (from 11), wherein said feedback signal is given by f(ai, bv), where i and v are drive current (the drive current is detected by Zs because driver current is equal to voltage divided by the resistance Zs; col. 2, lines 42-43) and drive voltage (the drive voltage is the voltage at the input of 4) respectively for said drive signal, and where a and b (although a and b not explicitly discussed, they are inherently included for es is a function of I and eo is a function of v) are percentages of i and v respectively utilized by said fsg circuit and wherein said attenuator (52,6,13) includes a

converter (52) which receives said feedback signal and generates a DC output which is a selected function of the received feedback signal (col. 5, lines 8-20), and a variable impedance component (speaker impedance) through which one of the input and output of said amplifier is applied, said DC output being applied to control the impedance of said variable impedance component.

Regarding claim 3, Noro shows that said feedback signal (from 51) is proportional to the absolute value of K (bv-ai) where K (K = 1 in Noro) is a gain in said fsg circuit (51).

Regarding claim 7, Noro shows the sense resistor (Zs) and a component (5s).

Regarding claim 11, Noro shows the average.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noro in view of Shiono et al (US 5,734,987).

Regarding claim 5, Noro fails to show a lowpass filter included in the fsg circuit. In fact, Noro fails to explicitly show the detail of the detection circuits (5s and 5o). However, one skilled in the art would have expected any well known detection circuit could be used for measuring the level without generating any unexpected result.

Shiono et al (hereafter Shiono) teaches such a well known level detector (59a,59b in Fig. 12) including a lowpass filter. Thus, it would have been obvious to one of ordinary skill in the art to modify Noro by incorporating the level detector as taught in Shiono because it was considered as a matter of design choice to select any well known level detector.

Since Noro's system is a linear system, the output of the fsg circuit using the level detector as taught in Shiono would have claimed function.

Response to Arguments

8. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 703-305-4865. The examiner can normally be reached on Monday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh N Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ping Lee
Primary Examiner
Art Unit 2644

pwl